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THIS IS UNEVALUATED INFORMATION

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1. Scientific research and development in the field of electricity was carried out by:

   a. Research institutes and small educational laboratories at five polytechnic universities. Educational installations and laboratories very often conducted particular theoretical studies or made surveys and measurements required for a professor's book. It was only in exceptional cases that such studies had the character of true research.

   b. Industrial engineering institutes, subordinate to different ministries (Machine Production, Post and Telegraph, Energetics) and by small laboratories and by some factories. Their activities were mainly concerned with problems of equipment, instruments, and machinery necessary for production or with prototypes of products, such as tubes and receivers, which have to be mass produced.

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2. There was generally an acute shortage of instruments, test equipment, machinery, laboratory equipment, and materials of all kinds as well as of money. Although the standards of research and development are probably higher in Poland now than before World War II, they are still very backward in comparison with Western standards.

3. The majority of Polish scientists and engineers worked very hard but their accomplishments were not significant. They would be able to obtain excellent results if they were given modern technical aids. There were many older and experienced scientists in Poland and among the new generation, there were some very talented and outstanding engineers. /See Annex A for a list of leading Polish research scientists./

4. The present stage of industrial development in Poland, limited possibilities of production in many fields, repeated reorganizations on every level, change of facilities, change of scientists and their staff, were factors which had a decisive influence on the capabilities and efforts in research.

Organizations Controlling Research

5. There was no central government body which directed and coordinated scientific research and development. Nor was research performed by private firms, since private enterprise had been abolished.

6. The Polish Academy of Science (Polska Akademja Nauk - PAN) was, nominally, the leading science center although still in a state of organization. Up to June 1953, some of the university educational laboratories were regarded as institutes of the Polish Academy of Science and were affiliated with it.

7. All engineering institutes and factory laboratories were directly subordinate to the ministries or other government organs, usually called central administrations for this or that industry. Within these units, research was directed in accordance with the six-year plan or with the demands of the Ministry of National Defense or of other ministries of industry.

8. The educational research laboratories belonged to the polytechnic universities and had a freer hand in research, which was conducted in the respective field of each faculty dean. All educational research institutes and laboratories submitted a detailed plan and preliminary budget to the Minister of Higher Education and Science every year. The budget was never fully approved; usually only about 10% of the requested amount was granted. Incidentally, all experiments performed to obtain a doctor's degree had to have a practical application. Research carried on by educational institutes and laboratories at the polytechnic universities was not classified and was accessible to the students. There was no apparent direct control over research and development by the Soviets except on radar, vacuum tubes, and equipment produced in factories producing "S" category (secret, military) equipment.

9. There was no exchange of scientific information between Poland and the USSR. It appeared that the USSR wanted to achieve and retain a leading position in the field of research and development. The USSR did not have confidence in the loyalty of Polish scientists.

10. A general exposition of the organizations which supervised, advised, and controlled research in Poland in all industrial and educational fields is given below. /See Annex B. The numbers below refer to those given in the chart./

1. Praesidium of the Council of Ministers (Prezydium Rady Ministrow), in Warsaw, controlled and supervised the Polish Academy of Science and was the highest executive authority to issue directives.

2. The State Commission for Economic Planning (Panstwowa Komisja Planowania Gospodarczego - PKPG), on Zurawia Street, in Warsaw, was the highest government authority in all economic matters. PKPG was divided into 24 civilian departments with about 2,700 employees and the largely independent Army Team of PKPG (Zespol Wojskowy - PKPG). The Army Team had a decisive influence on the policy of PKPG and was responsible for giving opinions on all production plans. 50X1

3. The Ministry of Machine Industry (Ministerstwo Przemyslu Maszynowego) presented, in some cases, plans for research and development and controlled their execution which was done by subordinate industrial institutes and factories in cooperation with the Central Administration for the Telecommunication Industry (Centralny Zarzad Przemyslu Telekomnikacyjnego - CZPT), /No. 4, below/.

3A. The Ministry of Higher Education and Science (Ministerstwo Szkol Wyszych i Nauk).

3B. The Ministry of Post and Telegraph (Ministerstwo Poczt i Telegrafow) controlled the Telecommunication Institute (Instytut Lacznosci - IL), /No. 4A, below/.

3C. Other ministries which were interested in research and development were:

a. The Ministry of National Defense (Ministerstwo Obrony Narodowej - MON). It controlled the armament industry through the Army Team at PKPG. (The positions of Vice-Minister of the Ministry of Machine Industry and of the Ministry of Power were held by Soviet or Polish Communists who had formerly been high-ranking Army officers.)

b. The Ministry of Power (Ministerstwo Energetyki).

c. The Ministry of Steel Works (Ministerstwo Hutnictwa).

d. The Ministry of Light Industry (Ministerstwo Przemyslu Lekkiego).

e. The Ministry of Navigation (Ministerstwo Zeglugi).

f. The Ministry of Railways (Ministerstwo Kolei).

g. The Ministry of the Chemical Industry (Ministerstwo Przemyslu Chemicznego).

4. The Central Administrations for the Telecommunication Industry (Centralny Zarzad Przemyslu Telekomunikacyjnego - CZPT) were intermediary government administrative authorities in all matters concerning the Ministry of Machine Industry and the industrial engineering institutes and factories. The Ministry of Machine Industry had about 8-10 CZPT's in various cities and each of them controlled several factories.

4A. The Telecommunications Institute (Instytut Lacznosci - IL) in Warsaw, at 11 Ratuszowa Street, occupied premises in the same building with the PIT /No. 5, below/ and the CBKT /No. 6, below/.

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4B. The Electrotechnical Institute (Instytut Elektrotechniki - IEl) in Warsaw, on Piekna Street, occupied a five-story building and carried out research in the electrotechnical field; on high tension, protection, etc.

The Central Administrations for the Telecommunication Industry, /No. 4, above/ controlled the following institutes and factories which conducted research and development on very low levels in different localities:

5. The Industrial Telecommunications Institute (Przemyslowy Instytut Komunikacji - PIT) in Warsaw, occupying part of the building at 11 Ratuszowa Street, was engaged in development and research in telecommunications and electronics. It possessed well-equipped laboratories and workshops.

6. The Central Construction Bureau for Telecommunication (Centralne Biuro Konstrukcyjne Telekomunikacji - CBKT) in Warsaw, at 11 Ratuszowa Street, occupied rooms on the first and second floor. Its laboratory was not as well equipped as the PIT's.

7. Electric Tube Factory (Zaklady Wytworcze Lamp Elektrycznych im. Rozy Luksumburg - L-1) in Warsaw, at 32-34 Karolkowa Street. /See 50X1

8. Radio Equipment Factory, T-3 (Zaklady Radiowe T-3 im. Marcina Kasprzaka, the former Warszawskie Zaklady Wytworcze Urzadzen Radiowych) in Warsaw, at the corner of Kasprzaka and Karolkowa Streets. 50X1

9. Radio Equipment Factory, T-6 (Dolnoslaskie Zaklady Wytworcze Urzadzen Radiowych - DZWR) in Dzierzoniow, produced the popular radio receivers, Mazur and Pionier. /for a description 50X1 of these receivers./

10 & 11. Other factories, which were not directly engaged in research and about which 50X1 no detailed information, were:

a. Radio Equipment Factory, T-11 or T-12, (Zaklady Wytworcze) in the Piekielko District of Warsaw. It produced radio transmitters for the Army.

b. Telephone Factory, T-?, (Zaklady Wytworcze Urzadzen Telefonicznych) on Barska Street, in Warsaw, produced telephones.

c. Teletechnical Factory, Elmet (Wytwornia Teletechniczna), in Warsaw, at 7 Kacza Street, produced relays and circuit equipment for the Ministry of Public Security, (UB).

d. Teletechnical Cooperative "Elektromatyka" (Spoldzielnia Elektromatyka) was a small workshop in Warsaw at 17-19 Piwna Street. It was connected with the Laboratory for Prototypes of Electrical Measuring Devices (Pracownia Prototypow Aparatow Elektrycznych Politechniki Wroclawskiej - PPAE) and had some interest in television.

e. Telecommunication Equipment Factory, T-?, (Zaklady Wytworcze Urzadzen Telekomunikacyjnych) in Lodz, produced telephones and condensers.

f. Telecommunication Equipment Factory, T-?, (Zaklady Wytworcze Urzadzen Telekomunikacyjnych) in Radom, produced telecommunication equipment.

g. Telecommunication Components Factory, T-?, (Zaklady Wytworcze Podzespolow Telekomunikacyjnych) in Krakow, at 4 Lipowa Street, produced radio components, choke coils, and transformer coils.

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h. Radio Equipment Factory, T-?, (Zaklady Wytworcze Urzadzen Radiowych) in Bielawa, near Dzierzoniow, produced amplifiers and rectifiers.

Educational Institutes and Laboratories

11. Scientific research and development in the field of electricity was carried out at the following polytechnic universities (under the Ministry of Higher Education and Science), [No. 3A, above], in their experimental and research laboratories and workshops which were known as "Zaklady" (businesses or enterprises) even though they were actually small.

Pl. At the Polytechnic University (Politechnika Warszawska) in Warsaw.

a. Laboratory of Teletransmission (Zaklad Teletransmisji), located within the university grounds. It occupied three rooms and one small workshop. It was poorly equipped. It was under the direction of a Professor NOWICKI, who was engaged in research on electronic instruments.

b. Electroacoustic Vibration Laboratory (Zaklad Electroakustyki i Zaklad Techniki Drgan Polskiej Akademji Nauk), was located within the university grounds. It occupied three rooms and had two laboratories. It was under the direction of a Professor MALECKI whose field was electroacoustics.

c. Medical Instruments Research Laboratory (Zaklad Przyrzadow Elektromedycznych) was located within the university grounds. 50X1 no further information about this laboratory.

d. Research Laboratory for Automatic Instruments (Zaklad Automatyki), was located within the university grounds and occupied approximately 100 sq. m. It was under the direction of a Professor LEPSON who was engaged in research on temperature control and telemetering instruments.

e. Research Laboratory of Basic Telecommunications (Zaklad Podstaw Telekomunikacji) was located within the university grounds and occupied four rooms. It was under the direction of a Professor SMOLINSKI whose field of research was amplifiers and magnetic materials.

f. Radio Technical Laboratory (Zaklad Radiotechniki), was located within the university grounds. It had two or three laboratories but was poorly equipped. It was under the direction of a Professor RYSZKO who was engaged in work with electronic instruments and short waves.

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g. Electronic Experimental Laboratory (Zaklad Experymentalny) in Warsaw, was located within the university grounds. It was under the direction of a Professor GROSZKOWSKI. 50X1 no detailed information.

P2. At the Polytechnic University (Politechnika Wroclawska) in Wroclaw:

a. Electric Power Workshop (Zaklad Elekroenergetyki Politechniki Wroclawskiej - ZEPN), headed by a Professor KOZUCHOWSKI, was the largest educational research center in Poland. It consisted of several laboratories and workshops in Wroclaw and of The Laboratory for the Prototypes of Electrical Measuring Devices (Pracownia Prototytow Aparatow Elektrycznych - PPAE) in Warsaw, which was engaged in the production of electronic instruments.

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b. Radio Technical Laboratory (Zaklad Radiotechniki) in Wroclaw, which occupied part of the building at 53 Prusa Street. It was under the direction of a Professor JELLONEK, and had a large laboratory.

P3. At the Polytechnic University (Politechnika Gdanska) in Gdansk:

a. Research Laboratory for Teletechnique (Zaklad Teletechniki) in Gdansk. It was under the direction of a Professor DORSZ. His field of research was unknown 50X1

P4. At the Silesian Polytechnic University (Politechnika Slaska) in Gliwice:

a. Radio Transmission Laboratory (Zaklad Urzadzen Radionadawczych) in Gliwice, was under the direction of a Professor ZAGAJEWSKI. The location of the laboratory and the field of research done there was unknown 50X1

b. Telecommunication Laboratory (Zaklad Teletechniki) in Gliwice, was under the direction of Professor TRYBALSKI. The location of the laboratory and the field of research done there was unknown 50X1

c. Research Laboratory (Zaklad Badan i Pomiarow) in Gliwice. 50X1
50X1 no further information.

P5. The Polytechnic University (Politechnika Lodzka).
50X1 no information on the type of research carried on there.

50X1 12. knew whether any research and development was conducted by Polish Radio (Polskie Radio) in Warsaw or by the Military Technical Academy (Wojskowa Akademia Techniczna) in Bernerowo, near Warsaw.

ANNEXES:

A. List of Leading Personalities Engaged in Research and Development in the Field of Electricity

B. Chart Showing Governmental Organizations which Supervise, Control and Conduct Educational and Industrial Research and Development in the Field of Electricity 50X1

C. Partial List of Technical Books Available in Poland 50X1

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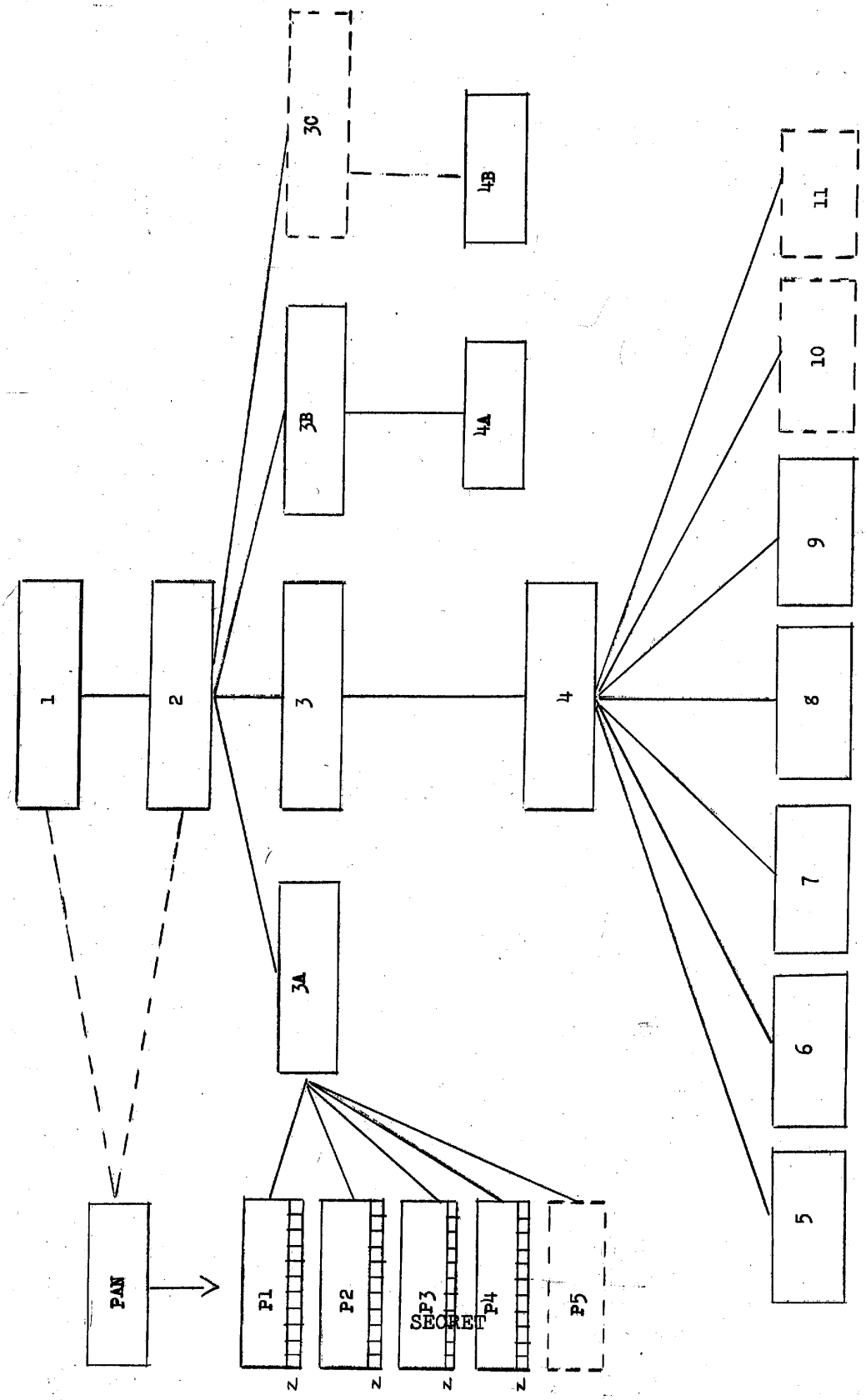
ANNEX B:

Chart Showing Governmental Organizations which Supervise, Control and Conduct Educational and Industrial Research and Development in the Field of Electricity



ANNEX C:

Partial List of Technical Books Available in Poland

a. In Polish Language

Author	Title
GROSZKOWSKI	Generacja i stabilizacja drgan elektromagnetycznych
GROSZKOWSKI	Technika wysokiej prozni
JELLONEK	Miernictwo radiotechniczne
LAPINSKI	Miernictwo teletransmisyjne
ZYSZKOWSKI	Teoria czwornikow
MALECKI	Elektroakustyka
SMOLINSKI	Wzmacniacze malej czestotliwosci
ZAGAJEWSKI	Urzadzenia radionadawcze
ROTKIEWICZ	Technika radioodbiorcza
STANIEWICZ	Elektrotechnika teoretyczna
KONORSKI	Elektrotechnika teoretyczna
MOSIEWICZ	Zasilanie urzadzen teletechnicznych
ZIMMERNANN	Pomiary i przyrzady pomiarowe radiotechniki
ZYSZKOWSKI	Elektroakustyka
ZIEMBICKI	Aparaty elektromedyczne
POGORZELSKI	Analiza matematyczna
POGORZELSKI	Rachunek operatorowy

b. Translations

TERMAN	Radiotechnika (1947)	From English
?	Lampy elektronowe	From Russian

c. Russian Technical Books Available in Poland

KRUG	Elektrotechnika (1953)
JEROFIEJEW	Automatyczne regulatory temperatury
SOLOWIEW	Automatyczna regulacja procesow kotlowych
CYKIN	Transformatory malej czestotliwosci